

**REMARKS**

This paper responds to the Office Action dated May 3, 2004. A diligent effort has been made to respond to the objections and rejections set forth in the office action and reconsideration thereof is respectfully requested in view of the above amendments and these remarks.

Claims 1-36 are pending in the application.

Regarding the Examiner's rejection of the claims under 35 U.S.C. § 102(e) and § 103(a) in light of U.S. Patent No. 6,498,786 to Kirkby et al. ("Kirkby et al."), the rejections are traversed because the reference does not teach or suggest the combination of the features recited in the claims presently on file.

In particular, the invention defined by claim 1 provides for a method for service allocation among a plurality of entities requiring service allocation in a communications or computing environment. A supply of services of one or more holding entities is initialized. One or more bidding entities are endowed with an adjustably fixed amount of utility and a requirement of the supply of services. The fixed amount of utility is a measure of the possibility of failure due to lack of resources. The supply of services of the holding entities is negotiated, with each bidding entity bidding a selected amount of its fixed amount of utility. The supply of the holding entities is redistributed among the bidding entities based on the negotiating.

By redistributing the supply of the holding entities among the bidding entities based on the negotiating, the supply is appropriately allotted amongst the bidding entities. The negotiating is based on the selected amount of the fixed amount of utility bid by each entity, the selected amount corresponding to a prediction of the amount of service needed to achieve a goal. As noted on page 11, lines 10-17 of the application, the prediction is based on the possibility of the failure of the resource to be available at the instant that the entity needs it. This possibility of

failure can be traded off against the price that the entity has to pay for it. Thus, the charge to the entity for the resource is not specifically for the quantity of resource used alone, but for the possibility of having the resource unavailable or removed. This is reiterated on page 6, lines 11-21.

The negotiation considers the importance of each bidding entity by the selected amount of the fixed amount of utility and allots a portion of the supply of services to the bidding entity. Where the fixed amount of utility endowed to the bidding entity and/or the selected amount of the fixed amount of utility are relatively low, the portion of the supply of services negotiated for the bidding entity can be inadequate to meet the bidding entity's requirement. At the same time, for another bidding entity that has been endowed with a relatively high fixed amount of utility and bids a relatively large amount of the fixed amount of utility for the supply of services, the method can provide a larger allotment of the supply of services and/or a greater guarantee of the availability of the supply of services.

In contrast, Kirkby et al. disclose a resource allocation method based on the concept of proportional fairness. A set of users input a willingness to pay for network resources. A controller determines how the users' willingness to pay are to be divided between the resources in order to determine the relative demands for the resources. Each resource is then divided between those users using it in proportion to how much they are willing to pay for the use of their share of it. The allocation takes into account the relative demands on all the resources in the network. A user may increase his share of the network resources allocated to him by increasing the value of his willingness to pay.

Kirkby et al. neither teach nor suggest endowing one or more bidding entities with an adjustably fixed amount of utility, wherein the fixed amount of utility is a measure representative

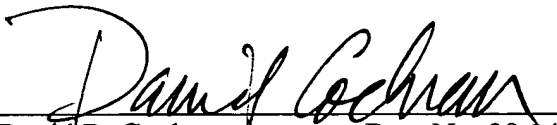
of the possibility of failure due to lack of resources. Kirkby simply discloses that a set of users with almost assuredly variable “funds” determine willingness to pay (WtPs”) for various resources and that the resources are allocated among the users based on their WtPs, with each user receiving a proportional share (see column 3, lines 37 to 49). The WtPs are not representative of the possibility of failure. In fact, Kirkby et al. disclose in column 10, lines 27 to 30 that a user can set his WtP to zero in order not to be allocated a portion of the resource.

As such, independent claim 1 is deemed to distinguish patentably over the cited prior art. As claims 2 to 18 are dependent on claim 1, and include all of its limitations, claims 2 to 18 are also deemed to patentably distinguish from the cited prior art.

Independent claim 19 also discloses similar limitations to those of claim 1 and, as a result, claim 19 is believed to patentably distinguish over the cited prior art. As claims 20 to 36 are dependent on claim 19, and include all of its limitations, claims 20 to 36 are also deemed to patentably distinguish from the cited prior art.

Applicant believes that this application is now in condition for allowance. To the extent any issues remain to be resolved, however, applicants request that the Examiner contact the undersigned representative to resolve these issues.

Respectfully submitted,

  
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